

NUCLEAR DIVISION NEWS



A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 2 — No. 4

OAK RIDGE, TENNESSEE

Thursday, February 25, 1971

Uranium Shipments During January Set \$13 Million Record

The Oak Ridge Gaseous Diffusion Plant registered an all-time high in January for sales under the Toll Enrichment Program. During the month, approximately 286,000 pounds of enriched uranium — at charges totaling \$13,612,534 — were shipped for use in nuclear reactors. The previous monthly high was in November, 1970, when toll enrichment charges totaled approximately \$11 million.

Toll Enrichment was instituted on January 1, 1969. Under this program, privately-licensed owners bring their uranium to a gaseous diffusion plant for enriching on a toll basis. Customers are charged for the services required to separate from natural uranium the desired percentage of uranium-235 isotope, usually between two and three percent.

During January 1971, ORGDP provided toll enrichment services for reactors in Florida, Maine, Illinois, Virginia, Wisconsin and Pennsylvania.

In addition to the Toll Enrichment Program, the gaseous diffusion plant also operates a "lease and sale" program for the Atomic Energy Commission. Under this activity, private industry leases government-owned uranium for use in nuclear reactors. Under this program, the Senn, Italy, reactor received enriched uranium valued at more than \$414,000 in January.

Toll enrichment and "lease and sale" programs have steadily increased as nuclear power in electrical generation grows rapidly.



CARBIDE GIFT—Union Carbide has presented a check for \$5,000 to Awareness House of Oak Ridge, Inc. Making the presentation is Roger F. Hibbs, president of the Nuclear Division, left, to Joyce Maienschein, Awareness House treasurer; and William G. Pollard, president of the organization. Awareness House is a youth center committed to the elimination of drug abuse in this area.

Carbide's CentriChem System Takes Industrial Research Award

Union Carbide Corporation's CentriChem clinical blood analyzer — a commercialization of development work performed at Oak Ridge — has been honored as one of 1970's top 100 new technical products by *Industrial Research* magazine.

The related Oak Ridge-developed analyzer is known as GeMSAEC. "The basic idea of the CentriChem is the same as that of GeMSAEC," reports Robert Gray, project manager of the corporation's Technical Center at Tarrytown, N. Y. Gray acknowledged the significant contributions of Norman G. Anderson and others at ORNL's Molecular Anatomy (MAN) Program, which developed the prototype of the system.

GeMSAEC — so named because of the project's major support at Oak Ridge from NIH's Institute of General Medical Sciences and the U. S. Atomic Energy Commission — is a microanalytical system using a rotor which centrifuges samples past a beam of light. The signal is registered by an oscilloscope and fed into a computer for almost instantaneous analysis.

CentriChem will be used in clinical laboratories where various blood tests are necessary to assist the physician in diagnosing disease. The system can test up to 30 samples of blood at once, doing in minutes what used to take hours.

In addition, the results from tests can provide the physician with information useful in detecting developing disorders and, through subsequent tests, in monitoring a patient's response to therapy.

The MAN Program made the basic GeMSAEC technology — including design and research data — available to private industry through the government policy advocating prompt dissemination of unclassified technical information. In addition to Union Carbide, several others are preparing commercial models based on the

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Keynote Speaker

Pollution Problem for Government, Industry, Individual, Reports Hibbs

The need for a concerted effort by government, industry and individual citizens to resolve the nation's environmental problems was stressed recently by Roger F. Hibbs, president of Union Carbide's Nuclear Division. Hibbs was a keynote speaker at a special centennial symposium at the University of Missouri-Rolla on "Technology for the Future to Control Industrial and Urban Wastes."

He told the more than 300 participants in the symposium that our environmental problems are all "intermixed and interrelated," and that no one segment of our population can unilaterally resolve the problems.

He viewed the role of government as guiding and controlling, not doing. He called for the government to promote more research into environmental problems at universities, in government laboratories and in industry. "Much of this research must be directed toward supporting a knowledgeable establishment of standards," he said. "The standards must evolve from the knowledge produced in research, modified by the interrelated complexities of modern society."

He emphasized that standards must be enforced on a broad and uniform basis. "The development of havens where the unscrupulous polluter can reap a competitive advantage cannot be permitted," he said.

Penalties To Be Assessed to Violator

The speaker explained that the enforcement of standards would require a large number of inspectors and proposed what he termed "a modification of the Internal Revenue Service technique" to defray the cost of such an activity. "Every potentially significant pollution entity would be required to measure and report annually its output of gaseous, liquid, and solid wastes, both in terms of concentration and quantity," he explained. "These reports could be audited and independent measurements taken on a sampling basis for conformance with the standards. Stringent penalties could then be assessed to the violator."

Hibbs viewed industry's role as a key in resolving environmental problems. "Industry possesses the know-how, skill, and facilities with which to attack the problem. Perhaps more important is the fact that industry can respond more rapidly to the incentives and the disincentives of a given situation than other sectors of our society," he said.

Can Actually Improve Efficiency

"Consider industrial response in the marketplace resulting from new technologies, changes in packaging, or a new import situation. The industrial manager is accustomed to accommodating these kinds of challenges in his business strategies. In the environmental situation the trick is to get the industrial manager to consider pollution and its effects on the environment as another aspect of his business strategy. For example, tightened operation, such as the simple prevention of spills, can actually improve process efficiency. Also, examination of previously discarded by-products may reveal other sources of potential income."

Hibbs cited several examples of the efforts by industry to abate pollution and to come up with new techniques to minimize environmental problems.

"One activity in which a large number of industries have played a key role is the use of nuclear energy for power-generating facilities. When nuclear energy is used for the generation of power, there are no sulfur oxides, no nitrogen oxides, no carbon dioxide, and no carbon monoxide. In short, nuclear power is produced without releasing combustion products to the atmosphere and, thus, contributes substantially in the fight for clean air."

Industry Is Attacking the Problem

He also pointed out the large sums of money now being expended by industry as part of the pollution abatement effort. With respect to cleansing waste water, he reported, expenditures have risen from about \$45 million in 1952 to an annual current rate of about \$600 million.

"The important thing is that industry is vigorously at-

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CENTRICHEM SYSTEM—This is the CentriChem system, Union Carbide Corporation's commercial version of the Oak Ridge GeMSAEC Fast Analyzer. The device is an automatic chemical analyzer described as 'a step into the future for the clinical and research laboratory of today.'



LOTS OF BONDS—Irene Householder, clerk in the Central Payroll Department, holds a continuous series of \$200 bond stock, which will be transcribed to individual Nuclear Division employees who buy bonds by payroll deduction.

Flexibility Increased

New Computer System to Aid U.S. Bond Payroll Deductions

Central Payroll has a new computerized payroll-deduction system for processing U. S. Savings Bonds which offers new options and conveniences for Nuclear Division employees at Oak Ridge.

Thanks to the new system, developed with the assistance of the Computing Technology Center, you can now name more than one bond recipient and/or variable bond denominations. And, if you wish, you may alternate among two or more persons on a routine basis. In the past, all

bonds purchased through payroll deductions had to be made out to the same recipient.

Safe-keeping receipts or bonds (depending on your choice) will be mailed once a month, starting in March, instead of once a week as was done under the previous system. The new system in no way affects the amount of interest or the time that the bonds go into effect. The individual merely receives the month's receipt or bonds accumulated instead of in-

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Haffey, Shapiro Named to Top UF Posts

Two Nuclear Division men have been elected top officials in the Anderson County United Fund.

John M. Haffey, Jr., assistant director of public relations, has been elected president; and Theodore Shapiro, Engineering Division at the Oak Ridge Gaseous Diffusion Plant, has been named vice president of the local community group. They were elected by the board of directors of the United Fund, made up of some 20 community and business leaders from this area.

'Over-Sees' 20 Agencies

Anderson County's United Fund administers funds in the neighborhood of \$300,000, and establishes policy for the 20-agency combination. Partners with the UF in the annual drive are two chapters of the American Red Cross.

UF meetings are always open to the public and participation by an interested public is always invited.

Haffey, who came with Union Carbide in 1964, is a native of Memphis. He attended Memphis State University and was an outstanding graduate of The University of Tennessee. He was editor of the Orange and White, was president of the student body his senior year, and was Volunteer of the Year in his third year at UT. After receiving his B.S. degree in journalism, he did graduate work in the Law School.

He served with the U.S. Army from 1959 until 1961.

Serves Red Cross

He is a board member of the

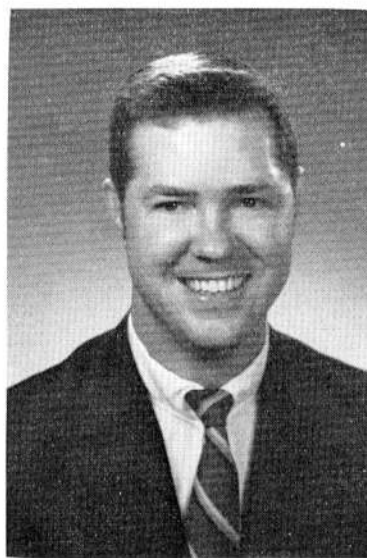
Activities Start

Activities for the United Fund have already begun for the year, as the community gears for the 1971 Fund Drive, slated for October of this year.

Charles A. Blake, Equal Employment Opportunities Coordinator for the Nuclear Division, has been named drive chairman.

Awareness House has been allocated a monthly operating grant to July, 1971. The new agency has been established to assist the community in drug abuse problems.

A new multi-service agency has been approved also, and a grant of \$15,000 allocated to the group.



John M. Haffey, Jr.



Theodore Shapiro

Oak Ridge Chapter of the American Red Cross, and serves on the board of the Ballet Association of Oak Ridge. He is a member of the National Association of Science Writers.

Haffey was with the Oak Ridge Institute of Nuclear Studies before coming with the Biology Division in 1964. He transferred to the general staff in 1968.

Mrs. Haffey is the former Linda Seyfried. The couple has two daughters, Sharon and Karen, and live at 101 Oklahoma Avenue, Oak Ridge.

Early Oak Ridger

Theodore Shapiro, a native of Boston, holds a B.A. degree in chemistry from Boston University and has done graduate work at UT in chemical engineering.

He came with Union Carbide in February, 1944, in the New York Office, and transferred to Oak Ridge that fall. Since coming here he has served in several capacities relating to chemical engineering designs and studies of plant processes.

He is supervisor of the chemical engineering section and is responsible, among other things, for studies related to plant-expansion programs and water and air pollution abatement.

Active in Societies

Shapiro is a member of the American Institute of Chemical

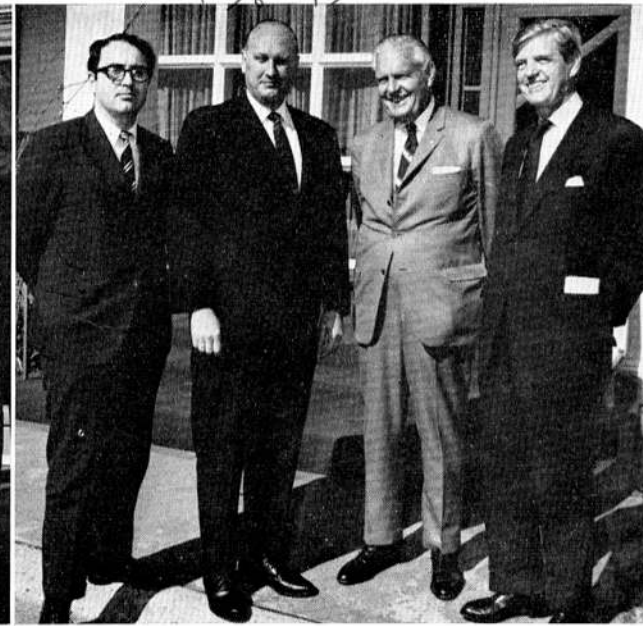
Engineers and is a registered professional engineer in the State of Tennessee. He is a member of the National Society of Professional Engineers.

He has served as secretary of the United Fund in Anderson County and was finance chairman of the Highland Rim Girl Scout Council. He is presently serving as state vice chairman for Professional Engineers in Industry.

The Shapiros have four children: Sandra, with the Massachusetts public school system; Susan, attending the University of Florida; Rhonda, in Oak Ridge High School; and Philip, in Jefferson Junior High School. Mrs. Shapiro is the former Selma Kravit. They live at 435 East Drive, Oak Ridge.

UF BOARD TO MEET

The Board of Directors for the United Fund of Anderson County will meet next Tuesday, March 2, 7:30 p.m., at the Anderson County Courthouse in Clinton. Among topics to be discussed are very important plans for the upcoming budget sessions that will establish individual goals for each UF agency and determine the overall goal for the 1971-72 fund drive. Interested persons are invited to attend and participate in the discussions.



WORLD PRESS INSTITUTE—Union Carbide Corporation's Nuclear Division recently was host to 15 young professional journalists from different countries throughout the world, who as Fellows of the World Press Institute are visiting the United States to acquire a comprehensive, personal background about this country. The World Press Institute is a private, nonprofit organization sponsored by Union Carbide and 13 other corporations and their foun-

dations. **LEFT:** Miss Razia Ismail, senior staff reporter for the **Indian Express** in New Delhi, chats with WPI Executive Director James V. Toscano, center, and Charles A. Blake, one of the speakers at a special seminar arranged for the visitors. Other speakers were R. F. Hibbs, Nuclear Division President; P. R. Vanstrum, Division Vice President in charge of Production; A. M. Weinberg, director, Oak Ridge National Laboratory; and J. L. Liver-

man, associate director, Biomedical and Environmental Sciences at ORNL. **CENTER:** A group picture of the visiting fellows. **RIGHT:** Discussing Oak Ridge operations are, from left, Toscano; Vanstrum; A. L. Cole, chairman of the board for WPI and Executive Editor for **Readers' Digest**; and C. O. Strother, Union Carbide Corporation. The group toured ORNL and other facilities of interest while in Oak Ridge.



THIN METAL INSPECTION—Frederick D. Mundt, Y-12 physicist in Physical Testing, demonstrates radiographic overlay standards which he devised to facilitate the evaluation of radiographs used in the inspection of thin metal products. He will discuss in depth the system at the American Society of Nondestructive Testing Conference in March.

Y-12er Develops Method to Facilitate Inspection of X-Ray Films in Testing

A Nuclear Division physicist at the Oak Ridge Y-12 Plant has devised a method to facilitate the inspection of X-ray films used in finding and evaluating defects in thin metal products.

Frederick D. Mundt, in Y-12's Physical Testing, will describe the accurate, time-saving method at the American Society of Nondestructive Testing Conference in Los Angeles, Calif., March 8-12. The title of his paper will be "Quantitative Interpretation of Radiation Opacity Changes by Radiography."

Conventional radiography involves the making of X-ray films of materials to determine the location of small, internal defects. Such defects appear on the film as varying shades of gray—with darker shades denoting thicker defects. Once located, the defects must be evaluated to determine whether they are of sufficient size to interfere with the proper performance of the material.

The method devised by Mundt involves the use of a film on which several radiographic standards are shown. This film is used as an overlay on the X-ray film being inspected to evaluate the



As February ends, and we near the 'shank' of winter, more Y-12ers move into veteran status with Union Carbide Corporation. Congratulations.

25 YEARS

Campbell R. King, Employment Department, February 19.

James S. Cole, Product Engineering, February 25.

Joel C. Thomason, Production Assay, February 25.

Forrest B. Waldrop, Ceramics and Plastics Development, February 27.

20 YEARS

William C. Jones, 0766 Machine Shop, February 16.

Mamie R. Cox, Production Analysis, February 19.

John McGhee, Jr., Dispatching Department, February 19.

Fred Vaughn, Dimensional Inspection, February 19.

J. R. Barkman, Chemical Services, February 19.

James A. Margrave, Guard Department, February 19.

Vernon C. Beckner, Beta Two Chemistry, February 19.

Brice M. Burrus, Gage Certification Laboratory, February 19.

John R. Gresham, General Field Shops, February 19.

Thomas K. Bishop, Jr., Instrument Engineering, February 19.

Kenneth L. Prewitt, Dimensional Inspection, February 20.

Keath Patrick, General Can Fabrication Shop, February 20.

William S. Porter, Industrial Relations Administration, February 20.

Fred A. Tallent, Jr., Beta Two Shop, February 21.

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thickness of defects. Use of the system has significantly reduced inspection time.

Alpha Five Processing Names Babb, Hensley, Toomey New Y-12 Foremen

Alpha Five Processing, in the Metal Preparation Division, announces the promotion of Samuel D. Babb, Warren J. Hensley and Robert S. Toomey, Jr. They were named processing foremen recently.

Samuel D. Babb, a native of Johnson City, attended East Tennessee State University before coming here May 12, 1969. He has served in the Air National Guard since 1967.

Babb worked with Tennessee Eastman and Sherwood Chevrolet in Johnson City before coming to Y-12.

Mrs. Babb is the former Martha Waldrop, and the couple has two children, Sara and Jeffrey. They live at 113 Pleasant Road, Oak Ridge.

Warren J. Hensley

Born in Caryville, Warren J. Hensley came with Union Carbide July 14, 1969. He worked at Big Foots Auto Parts, White Silica Sand Co., and Sherrod Electric Co., locally, and Abbott Laboratories, Chicago, before coming here.

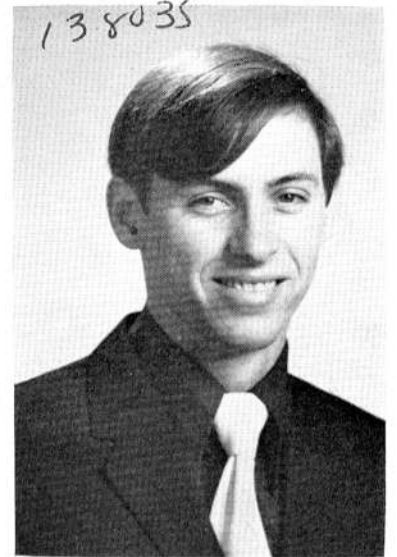
Married to the former Condra Lou Beets, Hensley lives at 102 Anna Road. They have a daughter, Teresa.

Robert S. Toomey, Jr.

A native of Phoenix City, Ala., Robert S. Toomey, Jr. came here September 25, 1967. He served in the U.S. Army from 1957 until 1965. He worked with the Chiclecraft, Inc., firm, Knoxville from 1965 until 1967. Before entering service he worked at the Cas Walker Supermarket in Knoxville for four years.

He was educated in the Oak Ridge public schools. His father R. S. Toomey, Sr. also works in Y-12.

Mrs. Toomey is the former Joyce Robertson. They have two children, Theresa and Victoria, and live at 130 Hamilton Circle, Oak Ridge.



Samuel D. Babb



Warren J. Hensley



Robert S. Toomey, Jr.



Ride wanted from Maiden Lane, Oak Ridge, to Bear Creek Portal, E Shift. D. T. Thomas, home phone Oak Ridge 482-4682.

Ride wanted or will join car pool from Harrill Hills section, Fountain City, to Pine Ridge Portal, straight day. Michael Waldrop, plant phone 3-5434, home phone Knoxville 688-4464.

Ride wanted from Yount Road, near Emory Valley Road, to North Portal, straight day. Pat Weaver, plant phone 3-5910, home phone Powell 947-8442.

Ride wanted from Mountain Road, Highway 61, north of Clinton, to Central Portal, H Shift. Jerry Cox, plant phone 3-5938, home phone Clinton 457-0775.

NO TAX RETURN REQUIRED

Returns on Income Taxes are no longer required for single persons with income under \$1,700, according to the Internal Revenue Service, nor from married persons filing jointly with incomes under \$2,300. These figures are increased by \$600 if the individual or his spouse is 65 or older, and by an additional \$600 if both are 65 or older.



COMPLETED TRAINING COURSE—Congratulations to the above assemblymen who have successfully completed the six-week special training course. They are, from left, B. R. Orr, G. E. Haynes, D. R. Butler, K. C. Bearden, W. A. Nichols, D. W. Harris and S. R. McCarty.

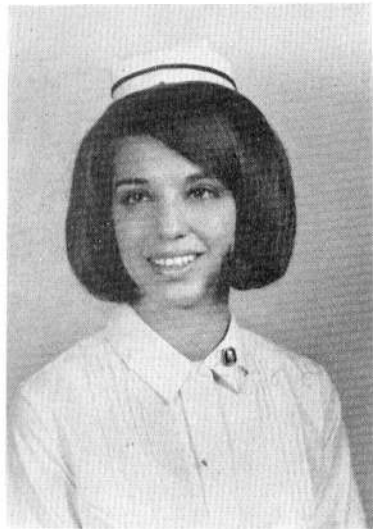
Company Store

Y-12's Company Store is moving.

On or about March 1, the Company Store will be moved from its present location at North Portal, to Building 9711-5. The new location is on the first level of the Cafeteria Building, near the Cashier's Office.

New store hours will be from 10:30 a.m. until 1:30 p.m. five days a week.

Nursing Scholarship Goes to Y-12 Daughter



Margaret Grim

Margaret Grim has been notified by the Veterans Administration of her appointment to a Nurse Internship at the Gainesville (Fla.) Veterans Administration Hospital. She will do graduate work at the University of Florida. Upon graduation she will be a Professional Nurse Clinician with a speciality in Medical Nursing. Margaret did her undergraduate pre-nursing work at The University of Tennessee and graduated from the UT Medical Unit in Memphis, receiving a BS degree in Nursing. She is a registered nurse in the states of Tennessee and Florida.

She is the daughter of Mr. and Mrs. Mark S. Grim, Jr., Norris. The father is in Y-12's Facilities Engineering.

Golf Tournaments

Recreation announces a five-tournament schedule for golfers, wishing to pit their talents against other Y-12ers during the summer months.

Greens fees for the courses will be \$3 per golfer. Foursomes must pre-register throughout the season for tee-off times. Coupons will appear during the summer in this section of the paper for interested golfers.

The golf schedule is as follows:

April 24	Wallace Hills
	Maryville
May 22	SW Point
	Kingston
June 26	Whittle Springs
	Knoxville
July 24	SW Point
	Kingston
August 28	Cedar Hills
	Lenoir City

Rollers Assume One-Point Lead on Mixed Alleyways

The Rollers rolled their way into the lead of the Y-12 Mixed League last week, bowling superior to the Cougars.

Frank Adams, Rollers, posted a 210 game, pushed to a 237 handicap singleton. The new leaders also racked up a new high in handicap series with a score of 2389.

Team	W	L
Rollers	21	11
Twisters	20	12
Alley Cats	20	12
Friskies	18	14
Hits & Misses	16	16
Goofers	13	19
Cougars	12	20
Roses 'n' Thorns	8	24

Welding Lab's Estes Spoke To Asheville AWS Meeting

Chester L. Estes, Y-12's Development Welding Laboratory, gave a paper at the Asheville Section Meeting of the American Welding Society recently.



C. L. Estes

Estes' subject was "The Role of the Welding Engineer in the Oak Ridge Y-12 Plant Development Division."

The meeting was held on February 24 in Asheville.

Y-12 Milestones

(Continued from Page 3)

Clyde E. Alcorn, Guard Department, February 23.

William L. Fairbanks, Sr., Beta Two Forming, February 25.

Carl G. Brewster, Medical Department, February 26.

William T. Arrowood, Quality Assurance, February 26.

Harry Davis, Beta Two Chemistry, February 26.

Toney V. Cable, Special Production Scheduling and Coordinating, February 26.

Max Whitley, General Field Shops, February 26.

William J. Williams, Chemical Services, February 26.

John F. George, Jr., Guard Department, February 26.

Ernest C. Rambo, Beta Two Forming, February 26.

Carl H. Dorr, A-2 Shops, 9212, February 26.

John R. Belew, General Machine Shop, February 26.

Wallace W. Hammer, Guard Department, February 28.

Alice J. Mattingly, Medical Department, February 28.

William A. Wells, Chemical Services, February 28.

15 YEARS

Robert W. Johnson, Ceramics and Plastics Development, February 20.

Boyd M. Adkins, Process Maintenance, February 24.

Gaines Aldridge, Beta Four Forming, February 26.

Margaret K. Kirby, Product Engineering, February 27.

Horace M. Branson, Beta Four Forming, February 28.

10 YEARS

Robert P. Rose, Dimensional Inspection, February 20.

John R. Webb, H-2 and F-Area Shops, February 24.

Wilfred L. Strange, General Machine Shop, February 25.

Eightballs Grab Lead On Classic Alleyways

The Eightballs are two-point leaders in the Classic Bowling League after wins over the Rippers and the Rebels, of late. The Smelters fell at the hands of the Has Beens, and last week split two with the All Stars.

Walter Joest, All Stars, racked up a 244 game on February 11, and Jay Sewell, Bumpers, tacked one on last week to the tune of 243!

League standings follow:

Team	W	L
Eightballs	20	8
Smelters	18	10
Swingsters	17	11
Markers	17	11
Bumpers	17	11
Has Beens	17	11
All Stars	16½	11½
Screwballs	14½	14½
Tigers	13½	14½
Playboys	13	15
Rojo's	11	17
Cubs	11	17
Eagles	10	18
Rippers	10	18
Rebels	10	18
Splinters	8	20

Latecomers and Splitters Share Starlite Command

The Latecomers and Splitters are tied for first-place in the Starlite League after three weeks of play into the second half. The Splitters came through last week with a big win over the Pin Boys.

Mike Ritter rolled a 220, 246 game, a 573, 651 series on February 11. Last week Roy Dukes posted a 213, 231 single, 567 scratch series.

League standings follow:

Team	W	L
Latecomers	7	2
Splitters	7	2
Woodpeckers	6	3
Mix-Ups	6	3
Rollers	5	4
Wildcats	4	5
Raiders	4	5
Comets	3	6
Pin Boys	2	7
Marauders	1	8



HONORED FOR SERVICE—Y-12er Bob Presley was recently honored by the Oak Ridge Jaycees as the "Region 5 Spoke of the Quarter." Presley, who works in the Dispatching Department of the Product Engineering and Scheduling Division, participated in virtually every Jaycee activity during the award period, which covered October through December, 1970. Among his many activities were service as chairman of the New Year's Eve Party, co-chairman of the annual Turkey Shoot, and participation in the Christmas tree sales, Halloween candy sales, and the Junior Miss Project. And Presley has been a member of the Jaycees for only six months!

Battery Plant Initiates Operations in Indonesia

A new battery plant in Djakarta, built at a cost of \$2.7 million has gone into operation in Indonesia.

The plant produces dry cells for flashlights, transistor radios, and general applications, which are sold under Union Carbide's Eveready trade mark. It is the third new facility to begin production of Eveready batteries in 1970, the others being located in Iran and Ivory Coast.

Union Carbide is the world's leading producer of dry cells. The Eveready battery is well known in the Far East where Union Carbide affiliated companies have long been active with production and marketing programs not only for batteries but for plastics, chemicals and other products.

Anodes New Headliner In C Bowling Warfare

The C League sees the Anodes atop the heap in current standings after they walloped the Big Five for four points.

George Cantrell, rolling for the Rollmasters, recently scratched a 237 game, upped to a 256 handicap single. That same night his team cleared a 3076 handicap series hurdle.

The C Leaguers did not roll last week as they observed a holiday.

League standings follow:

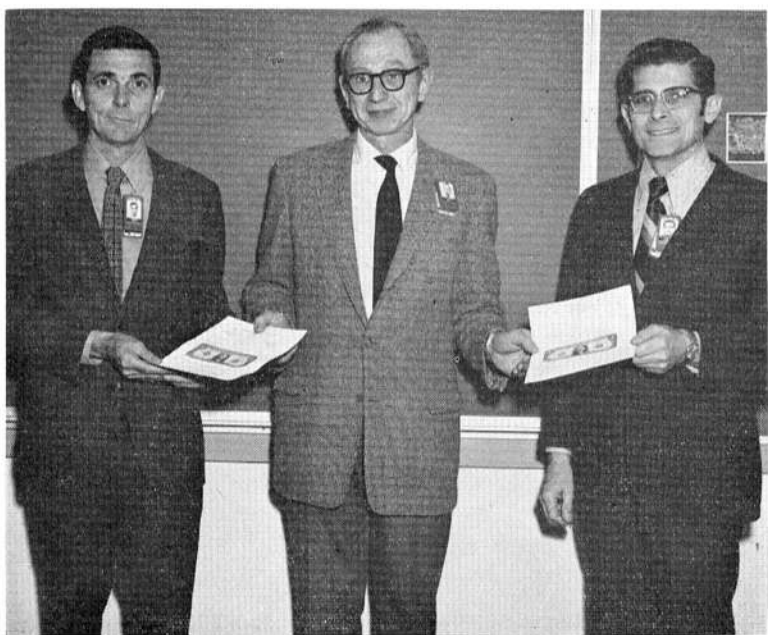
Anodes	20	8
Instrument Engineers	19	9
Sunflowers	19	9
Badgers	17	11
Fireballs	16	12
Rollmasters	16	12
Jaguars	15	13
Rounders	12	16
Parbusters	12	16
Purple Pygmies	9	19
Big Five	7	21
Royal Flush	6	22

SAFETY SCOREBOARD

The Y-12 Plant Has Operated
29 Days Or
666,000 Man-Hours
(Unofficial Estimate)
Through February 21
Without A Disabling Injury
SAFETY AT HOME,
AT WORK, AT PLAY



ATTAINS DEGREE—William C. Hatmaker, Mechanical Inspection, recently was awarded his B.S. degree in Industrial Education from the University of Tennessee. Hatmaker is an instructor in the Training and Technology Project here in Y-12. He is shown at a 'hardness of metal' testing machine.



GRAPHITE COATINGS—John Napier, left, and Tony Caputo, right, take a \$1 patent application letter for their joint development, a 'Method for Providing Metallic Carbide Coatings on Graphite.' George Marrow, Materials Engineering Development, center, presents the developers their letters.

THE CARBIDE COURIER

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ORGDP Staffers Instrumental In Initiating New TV Program

Three members of the Industrial Relations Division at ORGDP are currently playing key roles in a new television program, "Opportunity Line," seen on station WBIR, Channel 10, at 1:30 each Sunday afternoon. Robert J. Betts, superintendent of the Division, has been instrumental in the instigation and development of the program; Thomas L. Cressler has conducted most of the necessary research; and Joseph L. McMahon serves as a moderator on alternate Sundays.

The prime objective of "Opportunity Line" is to establish a central place where disadvantaged persons may know of job and training opportunities that are available in the eight-county area around Knoxville.

Betts first got the idea for "Opportunity Line" when he saw a similar program in Cincinnati early last year. There are over 50 such programs throughout the United States. Betts proposed the creation of Opportunity Line to the research committee of the Tennessee Valley Personnel Association of which he is chairman. The Association adopted the project and directed a questionnaire to 3,500 employers (having four or more employees) in Knox, Anderson, Blount, Roane, Union, Sevier and Jefferson Counties. The questionnaire asked for type of anticipated job openings, present method of recruiting, type of business and other pertinent information to enable the research committee in developing the program.

Interest Generated

The committee then approached the Knoxville office of the Tennessee Department of Employment Security. This office was somewhat skeptical at first but acknowledged that it was the logical office to coordinate the program, and when confronted with the results of the questionnaire agreed to joint sponsorship

with the Association. TV station WBIR agreed to donate the time as a public service to the Knoxville area.

"Opportunity Line" enables viewers to see the employment and training opportunities in the area. Jobs that are generated by Friday preceding the Sunday TV program are listed and described during the 30-minute show. Department of Employment Security employees are on duty Sunday at the Employment office to receive telephone inquiries and to make appointments the next few days for those interested in securing employment.

'Working Together'

Following the first program, the Employment office received 268 calls on Sunday afternoon, 66 on Monday, and 57 persons came directly to the office. Eleven job placements have been made and 18 more are pending.

Development of this program required many hours of research and planning on the part of numerous volunteers during working hours as well as giving of their own time off the job. Company managements regard the development of "Opportunity Line" as a distinctive public service to the community. The supervisors of the Knoxville office of the Department of Employment Security have asked the Tennessee Valley Personnel Association to appoint seven of their members to serve as an advisory committee to help improve the effectiveness of their operation. The development of "Opportunity Line" is an outstanding example of business and industry working with a state governmental agency for the mutual benefit of the community.

THE CARBIDE COURIER

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'Pocket Guide' Now Available

The 1971 "Pocket Guide" to the latest facts and figures about the Oak Ridge Gaseous Diffusion Plant is now available.

The pamphlet offers up-to-date capsule information on the plant—its history, projections for growth in nuclear power, a layman's description of the gaseous diffusion process, and general information of interest to all Nuclear Division employees.

Prepared by ORGDP's Technical Office Services group, the pamphlet comes in two sizes, a wallet-size copy which is mailed to all ORGDP employees and retirees, and a larger version prepared for tourists and guests who visit the Overlook.

Several thousand copies are distributed annually, according to R. R. Tippy, supervisor of the Technical Office Services group. "We in the Finance and Materials Division do the complete job—graphics, printing, photography, and reproduction," he said.

This year's edition is the third in the series which began in 1969. Copies are available to any Nuclear Division employee by contacting the Technical Office Services group, Bldg. K-1001, Mail Stop 112.

20 Years' Service

R. R. Snyder	02-05-51
M. B. Phillips	02-06-51
P. W. James	02-07-51
P. E. Riedel Jr.	02-09-51
H. B. McBride Jr.	02-19-51
A. L. Horton	02-19-51
M. E. Hazlett	02-22-51
H. S. Rutherford	02-22-51
W. H. Harber	02-23-51
W. C. Rider	02-26-51
D. M. Papke	02-26-51
C. W. Butterini	02-26-51

W. B. Luzader, C. M. Russell Promoted

Two promotions were announced at the Oak Ridge Gaseous Diffusion Plant recently. William B. Luzader was named a barrier foreman in the Barrier Plant of Operations Division, and Charles M. Russell was made an electronics data processing aide in the Computer Services Department of the Computing Technology Center.

William B. Luzader

Luzader worked a previous stint here at ORGDP coming in August of 1952 as a laboratory analyst in the Laboratory Division. Before then, he had worked at the Norfolk Navy Yard, serving two years in a construction battalion in the U. S. Navy. He also taught chemistry and mathematics in Boone County (W. Va.) schools.

Luzader was born in Berlin, W. Va. and attended schools in Weston. He received a B.S. degree from Sale College in 1949. Married to the former Betty Harding, he lives at 313 West Faunce Road, Oak Ridge. The Luzaders have four children: Barbara attending East Tennessee State University; William B., Jr., in Oak Ridge High School; and Karen and Karl, both attending Elm Grove Elementary School.

Boating, fishing and photography occupy Luzader's leisure time.

Charles M. Russell

Charles M. Russell is a native of Oliver Springs. Before coming to ORGDP he served two years in the U. S. Army and worked for the City of Oak Ridge.

Mrs. Russell is the former Judy Scarbrough. They have a two-year-old daughter and live at 225 Wadsworth Place, Oak Ridge.

Russell's outside interests include boating, skiing and motorcycle trail riding.



William B. Luzader



Charles M. Russell

Fabrication, Maintenance Employees Save \$210,000 in Cost Reduction Program

More than \$210,000 was saved in operating expenses by Fabrication and Maintenance employees last year since the start of the Division's cost reduction program the first part of 1970. In a number of cases, F & M employees were assisted by employees from other divisions and other installations.

Other Employees Helped

The program includes a careful review of drawings, bills of materials, use of proper equipment and the use of new and innovative techniques to produce high-quality work at reduced price.

A total of 133 cost-saving reports was recorded during the year; 107 F & M employees participated.

Employees outside the Division assisting in this effort were E. V. Bogle, Engineering; D. L. Burkett, Gaseous Diffusion Development; R. B. Clark, ORNL; J. M. Galyon, Purchasing; T. E. Koprowski, Operations; C. H. Meyer, Sandia-Albuquerque and F. S. Trotter, ORNL.

Fabrication and Maintenance employees who participated in one or more of the cost reduction accomplishments are:

C. R. Abercrombie, T. A. Abernathy, C. T. Angel, L. O. Bacon, G. C. Baker, C. R. Barlow, J. H. Battle, E. V. Bogle, B. M. Bramblett, W. Brown, W. S. Byars, F. W. Calhoun, D. E. Cardwell, C. Clapie, J. H. Clay, J. E. Cox, K. H. Cox, A. C. Crutcher, C. M. Cummings, J. P. Deaton, O. H. Dillon, J. Duncan, R. C. Duncan, E. C. Edwards, C. L. Eller, M. D. Fox, A. M. Galyon, V. B. Goddard, A. G. Griffie, C. L. Gritzner, H. E. Hallwas, M. C. Hanshaw, E. L. Halstead, J. B. Harvey, W. A. Haynes, B. E. Heidle, J. E. Heiskell, E. Hembree, C. C. Hendrick, E. R. Hensley, A. A. Hobson, N. B. Hockman, A. C. Hoskins, N. E. Howard, G. H. Hudson, J. P. Hughes, C. C. Hull, A. T. Humphreys, R. D. Jackson, E. L. Jenkins, D. D. Johnson, J. P. Jones, T. B. Keylon, E. C. Kirstowsky, F. L. Kreger.

N. N. Landay, R. G. Longmire, W. H. Luckett, R. W. Lynn, M. C. Martin, T. L. Matthews, G. P. McKeethan, C. H. Meyer, P. Moore, J. C. Murray, L. C. Patrick, W. R. Pegel, J. M. Perry, C. H. Peterson, R. L. Phillips, R. Pope, W. W. Pope, D. B. Rains, (Continued on Page 4)



ACHIEVEMENT AWARDS—L. A. Studinger and J. M. Ellis recently presented plaques to five Fabrication and Maintenance employees following their successful completion of the helper training program. Left to right are, Studinger, W. T. Smith, Jr.; R. G. Westmoreland (mechanics); T. L. Kiser, Jr. (sheet metal); R. E. Colyer and E. C. Stinnett, Jr. (machinists); and Ellis.

These Employees Reach 25 Years Service This Month



Husband-Wife Team Heads ORGDP's February Retirees



Henderson

Jago

E. T. Henderson, Tony Jago, and Ewing and Viola Moore will retire at the end of February.

Henderson

Ernest T. Henderson has been employed as an electrical mechanic in electrical maintenance since 1948. Before coming here he worked for the National Cement Company, Ragland, Ala. During World War II he served in the U. S. Navy.

Henderson was born in Piedmont, Ala. He has two children: Kenneth, who works at Y-12; a daughter, Ilajo Montgomery, both living in Oak Ridge. Henderson has nine grandchildren. He lives at 145 Lancaster Road, Oak Ridge.

Jago

Anthony P. Jago has been with Union Carbide Corporation for more than 39 years. He has been with ORGDP since 1944, and is presently a shift supervisor in the Barrier Plant Operations Division.

Jago is a native of Duluth, and is married to the former Evelyn Kuberra, also of Duluth. They have four children: Robert and William work at Y-12; daughters Maryann Newman, who lives in Oliver Springs, and Kathy Jeffers living in Blacksburg, Va. The Jagos have eight grandchildren.

Jago's outside interests include fishing, hunting and raising honey bees. He plans to do some gardening and enjoy his hobbies. The Jagos live on Route 3, Kingston.

Ewing and Viola Moore

Ewing and Viola Moore have both been employed in the Janitors Department for over 25 years. She was hired in September, 1944, and he came here in December that same year. Moore leaves at normal retirement age, while Mrs. Moore has elected early retirement "to take care of him." Before coming to ORGDP, Moore had worked for TVA at Watts Bar Dam and had been a farmer.

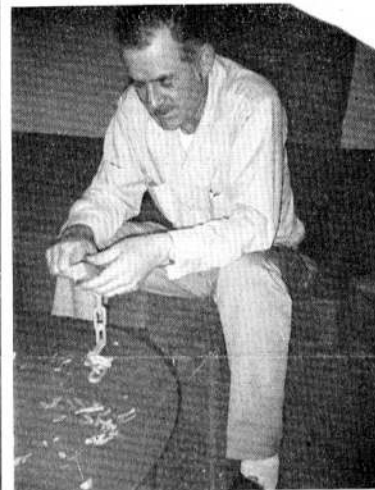
The Moores have known each other since childhood. They were both born in Meigs County. They have been married 42 years, and have three children: Reba Nell, Sweetwater; Virginia Jo, Detroit; and Clarence Moore, Decatur.

The Moores live on Route 2, Decatur. They plan to do some traveling, and when they return she plans to raise chickens and do more church work. Moore plans to do some truck farming, raise tobacco and catch up on fishing.

Editor's Note: C. J. Farmer's picture was inadvertently omitted from the January retirees. We are including his picture along with the employees who retire this month.

EARTH—love it or lose it.

Therapeutic 'Whittling' Proves Big Dividends Believe - It - Or - Not



Sam V. Haun

Whittling — first as therapy, then as a profitable hobby. That's the word from Sam V. Haun, in ORGDP's Garage.

Breaking his wrist may have been a lucky move for Haun who took up wood carving as therapy to strengthen the knitting bone. He recently received a check from the Ripley Believe-It-Or-Not Museum for \$415.58 for 15 of his carvings. This was the third check he had from Ripley, the first one in the amount of \$20 for a single piece and the second one for \$100 in partial payment for the 15 carvings.

Haun says he "whittled" a lot during his youth in Morristown, but had not carved any since his marriage. (Mrs. Haun, the former Adele Cantwell, didn't even know of her husband's 'hidden' talent!)

The artist starts with a solid piece of wood—either cedar or walnut. His work consists of wooden link chains, a cross with the center of both the vertical and horizontal pieces hollowed out (leaving small balls in the cut-out sections), a windmill with loose balls in the arms and a miniature man in the mill part, a pocket watch and chair, all from one piece of wood, and many others.

Haun says he has given away about 35 of his carvings.

Another "hobby" for the busy ORGDP man is teaching a class in small gasoline engine repair at the Oak Ridge Boys Club.

The Hauns live at 143 Lancaster Road, Oak Ridge. They have four children: Linda, a nurse in Atlanta; David and Larry, attending Vanderbilt and Western Kentucky State University on football

'Reuse' Not 'Waste' Advice Sought By Health & Safety

Oak Ridge Gaseous Diffusion Plant is seeking advice from employees on pollution abatement, particularly recycling as a method of reducing industrial pollution.

It is hoped that employees can provide logic to the reuse of materials rather than have the materials discarded.

Employees seeing "waste" when "reuse" might be both profitable and at the same time be instrumental in minimizing environmental pollution, should make their suggestions in brief descriptive note, to Environmental Health and Safety, Building K-1001, Stop 350.

Tippy to Lead Discussion At March AMA Meeting

R. R. Tippy, supervisor of the Technical Office Services group at the Oak Ridge Gaseous Diffusion Plant, will serve as a discussion leader at a Workshop Seminar of the American Management Association March 17-19 in New York City.

The seminar subject will be "Improving the Organization and Management of Mail and Messenger Services." Last year Tippy and other personnel involved in postal services were responsible for a Public Service Award to the Nuclear Division from the U. S. Post Office Department. The award lauded the Division's "outstanding efforts in the interest of improved public service."

Attending the seminar will be supervisors of mail departments, office managers, and controllers of office services.

Women's Bowling

Louise Turner and Mary Bailey had the best scores in the February 9 session at the K-25 Women's League. Louise had a 200-244 single game and Mary a 492-630 series.

Maxine Gunter had the sole Bowler-of-the-Week honors in the February 2 bowling with a 190-233 single game and a 480-609 series.

Standings
Pay-Offs 18 Wood Bees 9
Up-T'ners 11½ Bowlettes 9
Hot Shots 11½ Spotters 7
Pin-Ups 11 Hits & Misses 3

scholarships; and Tommy, in Robertsville Junior High School.

Two K-25 Bowlers Roll 'Giant' Ones!

Harold B. Gunter and James A. Parsons of the Tuesday League bowled 100 pins over their average within two weeks of each other. Gunter, carrying an average of 166, bowled a 266 on January 26. Parsons had an average of 156 when he knocked over 265 pins on February 9.

These men thus qualify for the American Bowling Congress Century Club Award and will be entitled to wear the Century Club chevron.

Lab Notes

J. C. Barton, Superintendent of the Laboratory Division, and Mrs. Barton returned recently from Vienna, Austria, where he presented an invited paper at the International Atomic Energy Agency Seminar on Test Requirements for Packaging for the Transport of Radioactive Materials, which was held February 8-12. The paper, "Planning for Safety in Packaging and Transporting Hexafluoride," was co-authored by A. T. Freeman, Paducah Gaseous Diffusion Plant. While in Europe, the Bartons also visited Spain, France, and the Netherlands.



SAFETY SCOREBOARD

OUR PLANT
Has Operated
124,000 Safe Hours
Through February 18
Since last disabling injury on Feb. 9

Cost Reduction

(Continued from Page 3)

A. H. Rice, H. Robinette, C. E. Robinson, J. G. Robinson, J. M. Rogers, R. L. Rollins,

J. H. Salts, B. J. Schaefer, H. B. Shnider, H. M. Shoptaw, S. C. Siler, F. D. Skipper, J. L. Sluder, C. B. Smith, W. W. Smith, S. A. Specter, L. A. Studinger, M. B. Tate, F. Taylor, C. R. Tedder, W. R. Templer, P. D. Thomas, B. M. Timmerman, F. Trotter, J. E. Vineyard, H. R. Walls, W. C. Weaver, W. J. Weeks, J. H. Williams, J. A. Womac.

15 Years' Service

H. L. Thornton 02-06-56
J. J. Maginnis 02-06-56
G. T. Williams 02-10-56

Part I

Is Hospital Stay Necessary?

By T. A. LINCOLN, M.D.

The steepest rise and the biggest percentage of the rising cost of medical care has occurred in the expense of hospitalization. There is a widespread belief that many hospitalizations are primarily for diagnostic purposes and are not really necessary. A person does not have to be admitted to the hospital as an inpatient to get a majority of the tests required.



Dr. Lincoln

A frequently heard complaint is that sickness and accident insurance companies make too little effort to monitor the use of insurance benefits or to control abuse. When costs rise, so the critics say, the hospital raises its rates and the insurance companies raise their premiums. The companies or individuals who pay for the insurance wind up paying for inefficiency. Rising hospital costs are due to a multitude of factors, many uncontrollable. The cost of insurance, however, is directly related to the extent of its use.

Before jumping to conclusions about this use or abuse, one needs to look more closely at the present-day practice of admitting ambulatory patients for diagnostic studies.

First, consider some of the reasons why patients and doctors prefer to have diagnostic studies performed in the hospital. Probably the biggest reason is money. The major cost of most diagnostic studies is covered by hospitalization or major medical insurance if they are performed on a patient who has been admitted to the hospital, has a diagnosis made and some treatment prescribed. These tests are usually not covered at all if performed in the same hospital or in another clinic on an out-patient basis. It is difficult to generalize on health insurance coverage because most group contracts have different types of coverage. Still, coverage for out-patient diagnostic tests is not widespread yet.

The physician's fee for his hospital visits during the diagnostic process is usually covered by insurance. If the patient is not admitted, he has to pay the physician's fee for each visit to his office. In this respect, both the patient and physician are benefited.

The physician often prefers the convenience of performing the diagnostic workup in the hospital. The various tests can be conducted in a more efficient manner. Each day when he makes his rounds, he usually has the results of the previous day's tests and can decide what different tests may be included and can write the appropriate orders immediately. Due to delays in receiving reports from the laboratory or x-ray department, and then the difficulties in contacting the patient for changes or repeats in the tests which may be necessary, the out-patient process is usually slower. Patients who live out of town almost have to be admitted to the hospital or stay in a hotel since travel back and forth each day is impractical.

Hospitals Must Stay Full at All Times

Many patients who pay part or all of their premiums look upon their insurance programs as an investment on which they deserve a return. Those who work for a company which pays the entire premium look upon it as an "in lieu of salary" benefit. They reason, "It is really part of my salary, so why not get some benefit?" Also, many tired wives greatly appreciate an opportunity for a brief rest in the hospital and are willing to pay the balance above the insurance to be waited on for a few days.

Hospitals need a buffer of non-emergency patients to keep the hospital comfortably filled during times, such as in the summer, when epidemics of respiratory disease are less common and elective surgery, such as hernia repairs, are less frequent. The fixed costs of running a modern hospital are so high that most of the beds must be kept filled. The occupancy goal for efficient operations of many general hospitals is considered to be about 85%.

Admissions for diagnostic studies and elective surgery radically decrease over holiday periods. A good example is what happened in Minneapolis last Christmas. Several large hospitals each closed down two or more nursing stations involving more than 150 beds because of the decline in admissions. It was obvious that many of their patients did not



Thomas E. Lane

Bond System

(Continued from Page 2)
dividual notices each week.
The last weekly notice was mailed out for the pay period through February 21 for hourly and weekly employees and was mailed this week for monthly salaries. From now on, all payrolls — monthly, weekly, and hourly — will receive bonds or bond-total statements at the end of each month.

The "addressograph - to - computer" change was generated by last year's bond drive which increased the number of employees buying bonds by payroll deductions from 700 to more than 3,300. For more information about the new system, contact Central Payroll (ext. 3-3391, Bldg. K-1007).

Those interested in making out a new bond or adding the name of a new recipient should check with their home plant's Paymaster's Office. The social security numbers and full names of new recipients are required information in making such a change.

ATTENTION, SOFTBALLERS

Play will begin shortly in the ORGDP-Y-12 competition in softball.

Organization of teams should start in early April, with practice sessions to begin shortly thereafter, and league action to start in early May.

Men who have teams to enter, or individuals wishing on a team, should call their respective Recreation Department... in ORGDP, extension 3-3097, and in Y-12, 3-7109.

need to be in the hospital for treatment since they magically disappeared over the holidays.

'Vacation' No Pleasure

Why might physicians and patients prefer having diagnostic studies done on an out-patient basis? Many patients don't find a two to four day "vacation" in the hospital particularly attractive. They would prefer losing only part of a day from work getting the tests done, staying at home at night and then returning as many times as necessary to get whatever tests need to be done.

With some insurance policies, the patient may come out better financially by paying the cost of the test himself. Obviously, if a patient knew what tests were going to be performed and their cost, he could calculate where the "break even" point would occur.

In Part II, the results of several experiments conducted to try to see if providing insurance coverage for out-patient tests would reduce hospitalization costs will be presented and a new variant of Parkinson's law applied to our health-care system.

Thomas E. Lane, Former Carbide Official, Passes

Thomas E. Lane, former General Superintendent of Industrial Relations for the Nuclear Division, died this month after an illness of several months.

A Carbide employee for 25 years until his retirement in 1968, Mr. Lane made many significant contributions to the nuclear energy program and was an outstanding leader in civic and community affairs. He was largely responsible for the tremendous recruiting efforts that were necessary for pioneer nuclear operations in Oak Ridge.

Mr. Lane came to Oak Ridge in early 1943 when Union Carbide was asked to assume responsibility for the Oak Ridge Gaseous Diffusion Plant. Hiring the necessary personnel to man the huge production facility, and keeping them on the job under harsh wartime conditions, were his primary responsibilities during those early years.

A native of Boston, Mass., Mr. Lane received his bachelor of science degree from the University of Massachusetts. Prior to joining Union Carbide, he was employed by Lever Brothers Company for 17 years, first as a research technician and later as manager of industrial relations. He then served for one year as a management consultant to the Brunswick Corporation.

Mr. Lane was a recipient of the James House Williamson Award of the Tennessee Industrial Personnel Conference, the Beaver Award of the Boy Scouts of America, and was nominated for the Human Relations Award of the Society for the Advancement of Management.

He was Chairman of the Board of the Bank of Oak Ridge, a national representative of the Boy Scouts of America, a member of the Oak Ridge Human Relations Commission, president of the Oak Ridge Community Chest, Chamber of Commerce and Rotary Club, and was Chairman of the Anderson County Courthouse Building Committee.

His other memberships included the Elks Club, American Management Association, and the Mayor's Committee on Race Relations. In addition, he served as Chairman of the Tennessee Industrial Personnel Conference and the AEC Contractors Personnel Conference. He also was a former president of the Indiana Personnel Association and a former director of the Industrial Relations Association of Chicago.

NEWS

Published Bi-Weekly For The
Employees Of
UNION CARBIDE
CORPORATION
NUCLEAR DIVISION

JAMES A. YOUNG Editor



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Association

International Association of
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Big Number 9 Wins For GBU Gym-Men

Two basketball games became history in February 8 action, as the 69ers opened action downing the James Gang 66 to 50, as the 69ers used brawn and height to overcome the scrappy James Gang. John Hawthorne, using the old overhead shot, tore the nets up from the outside but couldn't get enough help on the boards from teammates.

Beta 2 Miners used hustle and slick ball-handling to put the Mod Squad down 57 to 31 in final play on that Monday eve. The Brothers Milligan played 'feed-me-the-ball, I'll-feed-you-the-ball' to lead scoring. (Ron with 27, Jim with 12). Coupled with the near-perfect record at the foul line, the Miners just proved too much.

GBU's Take No. 9

On March 10 the GBP's chalked up win number nine (no losses), this time trouncing the Trojans 88 to 65. Beating back a second half attack by the Trojans, the GBU's used their height, deadly accuracy on the goal, and the fast break to build up a comfortable lead. Doug Raymer made the lay-up shot look mighty easy. For the Trojans, the shortest man on the floor, proved deadly with a jump shot.

The Shoestrings tied the Wild Bunch down 55 to 29 with too much muscle and hustle. Out-running and out-shooting, they played ace Jerry Brown only a half a game, but that proved enough.

Bottlenecks Break Away

"Old Faithful" Don Forrester led the losing squad as usual, but couldn't dent the overwhelming lead accumulated by the Strings.

Final game of that week saw the Bottlenecks outdistance the Untouchables 82 to 42. The old pros showed the youngsters a thing or two in ball-handling, as well as play domination.

Due to the non-availability of a gym, the Basketball League saw no action last week.

League standings follow:

Team	W	L
GBU's, Y-12	9	0
Shoestrings, Y-12	8	1
CC 69ers, K-25	8	1
James Gang, K-25	5	4
Beta 2 Miners, Y-12	5	4
Untouchables, Y-12	4	5
K-25 Trojans	4	5
Hawks, Y-12	4	5
Bottlenecks, Y-12	3	6
Wild Bunch, Y-12	2	7
Mod Squad, K-25	2	7
Demons, Y-12	0	9

'Spofford' Comedy Next at Playhouse

"Spofford" will be the next play at the Oak Ridge Playhouse. It opens March 5 and will continue March 6, 12, 13 and 19 and 20 at 8:20 p.m. each evening. Witty, warm and ingratiating, the play deals neatly with the joys and problems of suburbia through the very observant Spofford, a semi-retired chicken farmer, who has watched a tidal wave of commuters sweep over what was once his ranch.

The play is a series of views about things that might happen to people in a place like Westport, Conn. Based on "Reuben, Reuben" by Peter DeVries, it describes the literary efforts of the farmer. His decision to write a book about fellow townfolk puts them in panic.

Appearing in the play are Nancy Horner, wife of Garnett; Barbara Moehl, daughter of W. H., and Winnie Palmer. ORNL's J. T. Huffstetler plays in the title role.

Box office hours are from 10 a.m. to 5:30 p.m. Wednesday through Saturday. Tickets go on sale March 3.



OFFICIAL DECLARATION—Mayor A. K. Bissell has declared this week officially as 'Engineers Week' in Oak Ridge. Sam J. Senatore, left, and F. S. Patton, right, watch as the mayor pens his name on the document.

Friday's Banquet Climaxes Engineering Week Activities

This week has been designated as National Engineers Week. It was selected as the week in which George Washington's birthday falls. The National Society of Professional Engineers, in proclaiming the week, points out that the Revolutionary War general and first president was a surveyor, or civil engineer, by trade.

National Engineers Week is also promoted locally by the American Institute of Chemical Engineers (AIChE), the American Society for Metals (ASM), the American Society of Mechanical Engineers (ASME), the Society of Manufacturing Engineers (SME), the Institute of Electrical and Electronic Engineers (IEEE), the Instrument Society of America (ISA), and the Tennessee Society of Professional Engineers (TSPE).

Chairmen Named

The theme of this year's Engineers Week is "Engineering — to improve the quality of life," chosen to emphasize that today's engineers face the challenge of environmental problems that threaten the quality of our very life.

F. S. Patton, chairman of the Oak Ridge Chapter of TSPE has appointed the following chairmen to organize the week's activities: general chairman of the week,

S. J. Senatore (TSPE), ORGDP; education chairman, John Koger (ASM), ORNL; budget chairman, J. W. Gregory (TSPE), ORGDP; display chairman, B. J. Bogardus (ISA), ORGDP; banquet chairman, A. S. Willumsen (IEEE), AEC; ticket chairman, Ted Shapiro (AIChE), ORGDP; report chairman, P. J. Steger (ASNT), Y-12; publicity chairman, D. L. Gray (ASME), ORNL; and general advisor, W. C. Tunnell (TSPE), Y-12.

Banquet Friday

Mayor A. K. Bissell read a proclamation at the February 16 city council meeting designating the week as an official observance of the city of Oak Ridge. Displays marking the week are featured in store windows in the Downtown and Jackson Square businesses and in the Civic Center Library.

The main event of the week is a banquet to be held at the Oak Ridge Country Club, Friday, February 26. The Honorable Craig Hosmer, Member of Congress and the ranking Republican on the Joint Committee for Atomic Energy, will speak on "The Impact of Environmental Concerns on the Nuclear Power Growth." Tickets for the banquet may be obtained through the banquet chairman, A. S. Willumsen.

Pollution Problem for Government, Industry, Individual, Reports Hibbs

(Continued from Page 1)

tackling the pollution problem. Further, spurred on by the incentive of developing markets, a considerable amount of research is under way to produce products and processes to aid in the fight against pollution," he said.

'We Must Decide on Quality We Want'

"When we talk about pollution, each of us is prone to blame our woes on that segment of society we are most up-tight about at the moment. The energy industry is an example. Some would say that all we need to do is to quit air-conditioning our homes and buildings, and then we won't need so many generating plants and ugly transmission lines. Or people—there are just too many of them. Or automobiles, or garbage, or municipal sewage.

"This very complexity points up the central issue of the problem—that society must decide on the quality of life we want and how much we are prepared to pay for it. As we labor toward this consensus, we will find that government will be responsive and industry will react, and we will see an improvement in the quality of our environment," he said.

Pack Still Lead Volleyball Field

The Pack still leads the Volleyball set after recent competition. On February 11, the Environmentalists took two from the Quarks 15-10, 15-2; after dropping game one 15-4. The Set-Ups sank the Eagles 15-10, 15-8, and 15-13. The Radpheys downed the Gooneybirds 15-12, 15-8 and the Birds won game three 15-5. The ORNL Old Men beat the Boomerangs 15-1, 15-8 and 15-11.

On Court B Y-12's Old Men outlasted the AECOP's Foibles 15-8, 15-12; then lost 15-3. The Pack pelted the Bombers 15-6, 15-0 and 15-0. The Hawks won two from The Gang 15-5 and 15-10, dropping game two 15-9.

Last week, The Gang beat the Set-Ups for two 15-10 and 15-2, but dropped the middle contest 15-13. The Eagles edged by the Bombers 16-14 and 15-4, losing game two 15-10. The Hawks handled the Y-12 Old Men 15-1, 15-5 and 15-9. AECOP's Foibles fell the Environmentalists 15-3, 15-7; then dropped the last contest 16-14.

On Court B, the Pack put the ORNL Old Men down 15-8, 15-6 and 15-0. The Radpheys beat the Boomerangs 15-9, then lost two 15-11 and 15-5.

League standings follow:

Team	W	L
The Pack, ORNL	26	1
K-25 Hawks	24	3
The Gang, K-25	21	6
ORNL Old Men	17	10
Set-Ups, ORNL	17	10
Radpheys, ORNL	14	13
AECOP's Foibles, K-25	12	15
Quarks, K-25	12	15
Boomerangs, ORNL	11	16
Eagles, Y-12	10	17
Y-12 Old Men, Y-12	9	18
Bombers, ORNL	6	21
Gooneybirds, ORNL	5	22
Environmentalists, ORNL	5	22

CentrifChem

(Continued from Page 1)

GeMSAEC concept.

Those interested in more information about the CentrifChem system may contact the Marketing Manager, CentrifChem, Union Carbide Research Institute, Tarrytown Technical Center, Tarrytown, N. Y. 10591.

Other 1970 Carbide winners were an aircraft brake structure using carbon materials, developed by Carbon Products Division; a high-temperature graphite, also from Carbon Products; and a glass laser system, developed by Korad.

'EMPTY' SPACE

If all the "empty" space between the atoms and molecules in the body of a 200 pound man were removed, the man would be about the size of a speck of dust.

Ridge Jaycees, Jaycettes Aid in Hospital Project

The Oak Ridge Jaycees and Jaycettes, including many Union Carbide employees, were proud to play a role in the successful opening of the Jellico Municipal Hospital this month.

In Project Cramp—so-named because of the "writer's cramp" involved—volunteers addressed almost 7000 envelopes to hospital administrators throughout the United States, requesting help and funds for opening the Jellico hospital, which was built in the late 1960's but could not be opened until recently because of inadequate funds for staffing and other requirements.

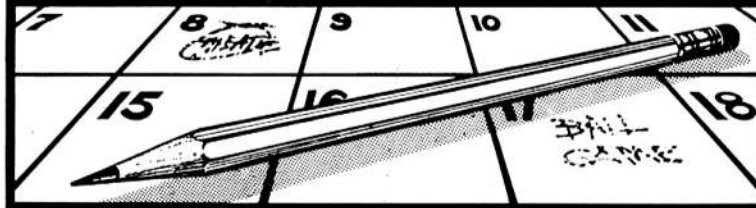
Some 250 man-hours were spent in Project Cramp, according to Jaycee chairman Bill Williams, who is employed at the Oak Ridge Y-12 Plant. Williams acknowledged, with thanks, the help of many individuals and civic groups in the letter-mailing project.

UNION CARBIDE CORPORATION
NUCLEAR DIVISION
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CALENDAR OF EVENTS



TECHNICAL

February 26

Physics Division Seminar: "Co-Existing with Nuclear Energy VIII: Nuclear Safety: Myth or Reality?" W. B. Cottrell, Reactor Division, ORNL. East Auditorium, Building 4500N, 3 p.m.

March 1

Biology Division Distinguished Lecturer Seminar: "Contact Inhibition, pH, and Cancer," Harry Eagle, Albert Einstein College of Medicine. Large Conference Room, Building 9207, 3 p.m.

March 4

University of Tennessee Department of Chemistry Seminar: "Proton and Ligand Exchange Kinetics of Peptide Complexes of Copper and Nickel," Dale W. Margerum, Purdue University. Room 300, UT Buehler Hall, 1:30 p.m.

March 5

ORNL Special Seminar: "A Distribution of a Global Atmospheric Circulation Model and How It Can Be Used for Climate Modification with Special Emphasis on Thermopollution," Warren M. Washington, National Center for Atmospheric Research. Central Auditorium, Building 4500N, 2 p.m.

The University of Tennessee-Oak Ridge Graduate School of Biomedical Science Lecture Series on the Biology of Aging: "Hormones, Genes, and Metamorphosis," C. M. Williams, Harvard University. Large Conference Room, Building 9207, 3 p.m.

March 8

Health Physics Division Seminar: "On Reactor Failure Probabilities," E. P. Epler. East Auditorium, Building 4500N, 10 a.m.

March 10

Metals and Ceramics Division Seminar: "Business as Usual—Not Today," H. H. Osborne. East Auditorium, Building 4500N, 2:45 p.m.

Nuclear Power Seminar: "General Effects of Low-Level Radiation," William L. Russell. Central Auditorium, Building 4500N, 3 p.m.

COMMUNITY

February 28

The Oak Ridge Civic Music Association presents "Reyes and Soler Ballet Espanol." Oak Ridge High School Auditorium, 8:15 p.m. Admission: Adults \$4; students \$2.

March 2

United Fund of Anderson County Board of Directors Meeting, Anderson County Courthouse, Clinton, 7:30 p.m.

March 5, 6

The Oak Ridge Playhouse presents "Spofford." Oak Ridge Playhouse, 8:20 p.m. Other performances on March 12, 13, 19 and 20. Admission: \$2.50.

HIGH POWER RIFLE LEAGUE

A High Power Rifle League is set to begin soon among Union Carbide riflemen. Details will follow.



MORE HELP NEEDED—Although the Jellico Municipal Hospital is now open, more funds are still needed for a smooth start to the first year of operation. Shown mailing letters requesting help are, from left, Jack Shumpert, Oak Ridge Jaycees external vice president; David Fitchpatrick, treasurer; and Bill Williams, chairman for Project Cramp. Those wishing to help the hospital should send checks or money orders to Bill Wheeler, Fund Chairman, P.O. Drawer 118, Jellico, Tenn. 37762.